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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/812,901

03/31/2004

Paul Tucker

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09/28/2006

PATENT DEPARTMENT - 53051  
KILPATRICK STOCKTON LLP  
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WINSTON-SALEM, NC 27101

EXAMINER

BELL, CORY C

ART UNIT

PAPER NUMBER

2164

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/812,901	TUCKER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Cory C. Bell	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

### **DETAILED ACTION**

1. Claims 1-30 have been examined.

#### ***Claim Objections***

2. Claim 24 is object to as it is currently dependant from claim 13, when it is apparent that the claim was intended to depend from claim 24. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-30 are rejected under 35 USC 112 second paragraph.
4. Claims 1 and 23 and others contain the phrase “substantially identical” which renders the claims indefinite, as the meets and bounds of the claims are unclear. The examiner finds no evidence in the instant specification, nor does the examine find any support that it would not have been obvious to one of ordinary skill in the art what is the intended scope of this phrase. See MPEP 2173.05(b).
5. Claims 2 and 3 are rejected as they contain the “substantially identical” phrase as discussed above, and “the backend search system” which lacks antecedent basis.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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6. Claims 1-30 are rejected under 35 U.S.C. 101 for the following reasons:

First, claims 1-30 fail to provide a useful concrete and tangible result as the modified query is never executed, nor or its results returned to the user. Thus, there is no useful result.

Second, claims 23-30 provide no means for executing, nor any suggestion that the program code is executed, and thus is merely non-functional descriptive material. Also, it the code is never executed no useful, concrete, and tangible result can be obtained.

Last, claims 23-30 fail to meet the tangibility requirement as the specification states, "Embodiments of CRM for memories 108 and 156 include, but are not limited to, an electronic, optical, magnetic, or other storage or transmission device," and transmission type media (i.e. carrier waves) are not tangible.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 3, 5, 9, 23 - 25, and 28 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US 20050222975, known hereafter as Nayak.

7. *As per independent Claims 1, 5 and 23*, Nayak teaches the limitations as follows:

receiving a first search query having a first content;

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rewriting the first search query into a modified search query;

mapping the first search query to the modified search query in a cache memory; {Para 46 of Nayak, beging on the third line from the bottom of the first column "After a query is expanded, the expansion component can provide the expanded expression to a shared memory 1014. The query expander client component 1012 can retrieve the expression from the shared memory 1014 and load it into keyword cache 1016, which can be utilized by execution engine component 770 to query the compressed index 760."}

receiving a second search query having a second content',

determining whether at least a portion of the second content is substantially

identical to the first content;

responsive to the at least one portion of the second content being substantially

identical to the first content, substituting the modified search query for the at least one

portion of the second content to form a modified second search query; and

issuing a search of the modified second search query having the substituted

modified search query to return one or more search results as responsive to the received

second search query. {Para 46 of Nayak, "The optimized query can then be

passed to execution engine component 770 for execution. The

query can be executed at that time or alternatively the query

can be expanded first. Query expander client component 1012 can

receive the index query string from the execution engine

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component 770. Subsequently, the expander client component 1012 can check to determine whether an expanded query is located in the keyword cache 1016. Keyword cache 1016 provides a very fast memory that the execution engine component 770 can utilize. If the expanded query is located in the keyword cache the execution engine component 770 can simply retrieve the expanded query from the cache." }

8. *As per dependent Claims 2 and 24, Bowman teaches the limitations as follows:*

*See the claims 1 and 23 rejection above.*

9. *As per dependent Claims 3 and 25, Bowman teaches the limitations as follows:*

The method of claim 1, further comprising:

responsive to the second content not comprising any portion that is substantially

identical to the first content, issuing a search of the received second search query to the

backend search system. {Para 46 shows that the query is always eventually executed on the backend

search system}

10. *As per dependent Claim 9 and 28, Bowman teaches the limitations as follows:*

*See Claim 1 rejection above.*

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10, 20, and 22-30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US 6006225, known hereafter as Bowman.

11. *As per independent Claims 1, 5 and 23*, Bowman teaches the limitations as follows:

receiving a first search query having a first content;

rewriting the first search query into a modified search query; {Col 13 line 65-col 14 line 2}

mapping the first search query to the modified search query in a cache memory; {Col 8 lines 44-

48 Teaches logging all queries, which include those which have been rewritten, col 8 lines 15-19

teach generating the mapping and storing it in a query correlation table, and col 5 line 37-38

teach the correlation table being stored in a cache memory}

receiving a second search query having a second content',

determining whether at least a portion of the second content is substantially

identical to the first content;

responsive to the at least one portion of the second content being substantially

identical to the first content, substituting the modified search query for the at least one

portion of the second content to form a modified second search query; and

issuing a search of the modified second search query having the substituted

modified search query to return one or more search results as responsive to the received

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second search query. {Col 6 lines 19-31 and Figure 1 item 133 is the backend data system}

12. *As per dependent Claims 2 and 24*, Bowman teaches the limitations as follows:

*See the claims 1 and 23 rejection above.*

13. *As per dependent Claims 3 and 25*, Bowman teaches the limitations as follows:

The method of claim 1, further comprising:

responsive to the second content not comprising any portion that is substantially

identical to the first content, issuing a search of the received second search query to the

backend search system. {Col 5 line 61- Col 6 line 2}

14. *As per dependent Claims 4 and 26*, Bowman teaches the limitations as follows:

The method of claim 1, wherein the cache memory comprises a look-up table for the mapping.

{Abstract, or Col 2 lines 47-50}

15. *As per dependent Claim 6*, Bowman teaches the limitations as follows:

The method of claim 5, wherein the backend data system is physically

apart from the cache memory and comprises one or more databases having data to be

searched.{Figure 1}

16. *As per dependent Claim 7*, Bowman teaches the limitations as follows:

See Claims 4 and 6 rejections.



17. *As per dependent Claims 8 and 27, Bowman teaches the limitations as follows:*

The method of claim 1, wherein the step of mapping is performed offline  
prior to the step of receiving the second search query; and the step of substituting is  
performed online upon receiving the second search query. {Col 7 lines 60-65, the substituting  
*step must inherently take place online in order for the query to be processed when it is*  
*submitted}*

18. *As per dependent Claim 9 and 28, Bowman teaches the limitations as follows:*

The method of claim 1, wherein the step of rewriting the first search  
query into the modified search query comprises:  
determining that the first search query is frequently received {Col 2 line 37-40, and Col 6 lines  
*34-37*  
issuing the first search query to the backend data system to find information  
related to the first search query;  
determining additional content for the first search query based on the related  
information; and  
rewriting the first search query into a modified search query having the first  
content and the additional content. {Col 13 line 63 – Col 14 line 12}

19. *As per dependent Claim 10 and 29, Bowman teaches the limitations as follows:*

determining a more common or popular phrase or term for the first content of the

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first search query; and

rewriting the first search query into the modeled search query having the more

common or popular phrase or term in place of the first content{Col 7 lines 45-50}.

20. *As per dependent Claim 20*, Bowman teaches the limitations as follows:

See Col 5 line 37.

21. *As per dependent Claim 22 and 30*, Bowman teaches the limitations as follows:

See the Claims 9 and 28 rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 11-19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6006225, known hereafter as Bowman or US 20050222975, known hereafter as Nayak.

23. Claims 11-19 are rejected as Bowman teaches the claims upon which these claims are dependant, as well as teaching the system being implemented on one or more servers in col 5 lines 34-45, but fails to expressly disclose how the system could be implemented on disparate servers. However, it would have been obvious to one of ordinary skill in the art at the time of the

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invention to integrate or separate the system into any combination of servers containing the different steps and components of the system. This is supported by *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965), for making the components integral, and *In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961), for making the components separable. It would also have been obvious to one of ordinary skill in the art to make these separable to decrease the amount of load on a single server, and to make them integral to decrease the amount of delay in communications.

24. Claim 21 is rejected as although Bowman fails to expressly disclose the cache being on a disk storage. The examiner take official notice that caches on a disk storage were well known in the art at the time of the invention. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to include this feature in cases where the size of the cache was large and would be expensive to implement on memory chips.

### ***Conclusion***

The two set of rejections in this instance is proper, due to the proximity of the date of the reference to the filing date of the instant application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cory C. Bell whose telephone number is (571) 272 2736. The examiner can normally be reached on m-f 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272 4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**SAM RIMELL**  
**PRIMARY EXAMINER**